UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,524	09/23/2004	Peter T. Wu	24.0920	5523

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EXAMINER
HUGHES, SCOTT A

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/711,524	WU ET AL.
	Examiner	Art Unit
	Scott A. Hughes	3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2005*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/23/2004*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 9/23/2004 contains a reference that is

not considered by the examiner. Patent number 6594651 listed on the IDS as being

patented to Kimball, et al, is actually a patent to Kabra, et al titled "Method and

Apparatus for Parallel Execution of SQL-From Within User Defined Functions."

Therefore, this reference is not considered by the examiner. If applicant would like the

reference by Kimball to be included in the known prior art of this application, a new IDS

with a correct patent number for the Kimball reference must be submitted. (Examiner

believes the Kimball reference was supposed to be numbered 4594691. This reference

by Kimball has been cited in the Notice of References Cited). Applicant is advised that

the date of any re-submission of any item of information contained in this information

disclosure statement or the submission of any missing element(s) will be the date of

submission for purposes of determining compliance with the requirements based on the

time of filing the statement, including all certification requirements for statements under

37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

Color photographs and color drawings are not accepted unless a petition filed

under 37 CFR 1.84(a)(2) is granted. It is noted that such a petition has been filed, and

the drawings will be accepted pending the approval of this petition. Any such petition

must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of

color drawings or color photographs, as appropriate, and, unless already present, an

amendment to include the following language as the first paragraph of the brief

description of the drawings section of the specification:

> The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings

and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by Shenoy.

With regard to claim 1, Shenoy discloses a method for compression of sonic log

data. Shenoy discloses sorting peak components in sonic log data. Shenoy discloses

filtering the sorted peak components to remove high-frequency portions in the peak

components. Shenoy discloses decimating the filtered peak components according to a

selected ratio to produce compressed data (abstract; Column 3, Lines 5-60; Column 4,

Line 39 to Column 6; Column 8; Columns 9-12).

With regard to claims 2-3, Shenoy discloses that sorting the peak components

comprises sorting for compressive wave, shear wave, and Stoneley wave components

in sequential order (Figs. 7a,b) (Column 2; Columns 5-6, 9-10). Shenoy discloses

sorting the peaks by time and by frequency. Therefore, the sorting would be done

sequentially as the peaks for P-wave, S-wave, and St-wave would come in sequential

order by frequency or time.

With regard to claim 4, Shenoy discloses that sorting involved rules based on

expected slowness ranges for the peak components (Column 3, Line 50 to Column 4,

Line 5; Column 5, Line 20 to Column 6, Line 62; Column 8; Columns 9-12). .

With regard to claim 5, Shenoy discloses that sorting the peak components

comprises correcting peak spikes due to noise in the sonic log data (Column 11, Line 54

to Column 12, Line 2).

With regard to claim 6, Shenoy discloses that filtering uses a low pass filter

(Columns 6-8).

With regard to claim 7, Shenoy discloses that the low pass filter is selected to cut

off a top 75% frequency in the sorted peak components (Column 5, Lines 48-65;

Columns 6-8). Shenoy discloses that the low pass filters is a narrow-band filter. From

the disclosure, it is understood that this narrowband low pass filter would be selected to

remove the top 75% of the frequency.

With regard to claim 8, Shenoy discloses that the selected ratio is four to one

(Column 5, Line 48 to Column 6, Line 30). Shenoy discloses a decimator that is an

integer M. He further discloses one example where the ratio is five to one. Therefore, it

would be assumed that one of the integers used would be a ratio of 4 to one.

With regard to claim 9, Shenoy discloses that the sorting, the filtering, and the decimating are performed in a downhole tool (abstract; Column 3, Lines 1-28; Column 4, Line 39).

With regard to claim 10, Shenoy discloses sending the compressed data uphole via telemetry (abstract).

With regard to claim 11, Shenoy discloses that sending the compressed data uphole comprises encoding the compressed data (Column 6, Line 62 to Column 7, Line 6; Column 11, Lines 45-55).

With regard to claim 12, Shenoy discloses that the telemetry comprises mud pulse telemetry (Column 11, Lines 45-55).

With regard to claim 13, Shenoy discloses a method for telemetry transmission of sonic log data. Shenoy discloses sorting peak components in sonic log data. Shenoy discloses compressing the sorted peak components to produce compressed data. Shenoy discloses packing the compressed data to produce data packets for telemetry transmission and sending the data packets where desired using telemetry (abstract; Column 3, Lines 5-60; Column 4, Lines 39 to 68; Columns 5-6; Column 8; Columns 9-12).

With regard to claims 14-15, Shenoy discloses that sorting the peak components comprises sorting for compressive wave, shear wave, and Stoneley wave components in sequential order (Figs. 7a,b) (Column 2; Columns 5-6, 9-10). Shenoy discloses sorting the peaks by time and by frequency. Therefore, the sorting would be done

sequentially as the peaks for P-wave, S-wave, and St-wave would come in sequential order by frequency or time.

With regard to claim 16, Shenoy discloses that sorting involved rules based on expected slowness ranges for the peak components (Column 3, Line 50 to Column 4, Line 5; Column 5, Line 20 to Column 6, Line 62; Column 8; Columns 9-12).

With regard to claim 17, Shenoy discloses that sorting the peak components comprises correcting peak spikes due to noise in the sonic log data (Column 11, Line 54 to Column 12, Line 2).

With regard to claim 18, Shenoy discloses that compressing comprises filtering the sorted peak components using a low pass filter and decimating the filtered sorted peak components according to a selected ratio (Columns 6-8).

With regard to claim 19, Shenoy discloses that the low pass filter is selected to cut off a top 75% frequency in the sorted peak components (Column 5, Lines 48-65; Columns 6-8). Shenoy discloses that the low pass filters is a narrow-band filter. From the disclosure, it is understood that this narrowband low pass filter would be selected to remove the top 75% of the frequency.

With regard to claim 20, Shenoy discloses that the selected ratio is four to one (Column 5, Line 48 to Column 6, Line 30). Shenoy discloses a decimator that is an integer M. He further discloses one example where the ratio is five to one. Therefore, it would be assumed that one of the integers used would be a ratio of 4 to one.

With regard to claim 21, Shenoy discloses unpacking the data packets to regenerate the compressed data. Shenoy discloses decompressing the regenerated compressed data to reconstruct the peak components (Fig. 2) (abstract; Columns 3, 7).

With regard to claim 22, Shenoy discloses that decompressing comprises interpolating the regenerated compressed data (Column 5, Lines 20-47; Column 6, Column 8, Lines 45-65).

With regard to claim 23, Shenoy discloses a system for compressing sonic log data comprising a processor and memory means, wherein the memory stores a program having instructions for sorting peak components in the sonic log data, filtering the sorted peak components to remove high-frequency portions in the peak components, and decimating the filtered peak components according to a selected ratio to produce compressed data (abstract; Column 3, Lines 5-60; Column 4, Line 39 to Column 6; Column 8; Columns 9-12).

With regard to claims 24-25, Shenoy discloses that sorting the peak components comprises sorting for compressive wave, shear wave, and Stoneley wave components in sequential order (Figs. 7a,b) (Column 2; Columns 5-6, 9-10). Shenoy discloses sorting the peaks by time and by frequency. Therefore, the sorting would be done sequentially as the peaks for P-wave, S-wave, and St-wave would come in sequential order by frequency or time.

With regard to claim 26, Shenoy discloses that sorting involved rules based on expected slowness ranges for the peak components (Column 3, Line 50 to Column 4, Line 5; Column 5, Line 20 to Column 6, Line 62; Column 8; Columns 9-12).

With regard to claim 27, Shenoy discloses that sorting the peak components comprises correcting peak spikes due to noise in the sonic log data (Column 11, Line 54 to Column 12, Line 2).

With regard to claim 28, Shenoy discloses that filtering uses a low pass filter (Columns 6-8).

With regard to claim 29, Shenoy discloses that the low pass filter is selected to cut off a top 75% frequency in the sorted peak components (Column 5, Lines 48-65; Columns 6-8). Shenoy discloses that the low pass filters is a narrow-band filter. From the disclosure, it is understood that this narrowband low pass filter would be selected to remove the top 75% of the frequency.

With regard to claim 30, Shenoy discloses that the selected ratio is four to one (Column 5, Line 48 to Column 6, Line 30). Shenoy discloses a decimator that is an integer M. He further discloses one example where the ratio is five to one. Therefore, it would be assumed that one of the integers used would be a ratio of 4 to one.

Conclusion

The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A. Hughes whose telephone number is 571-272-6983. The examiner can normally be reached on M-F 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAH

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